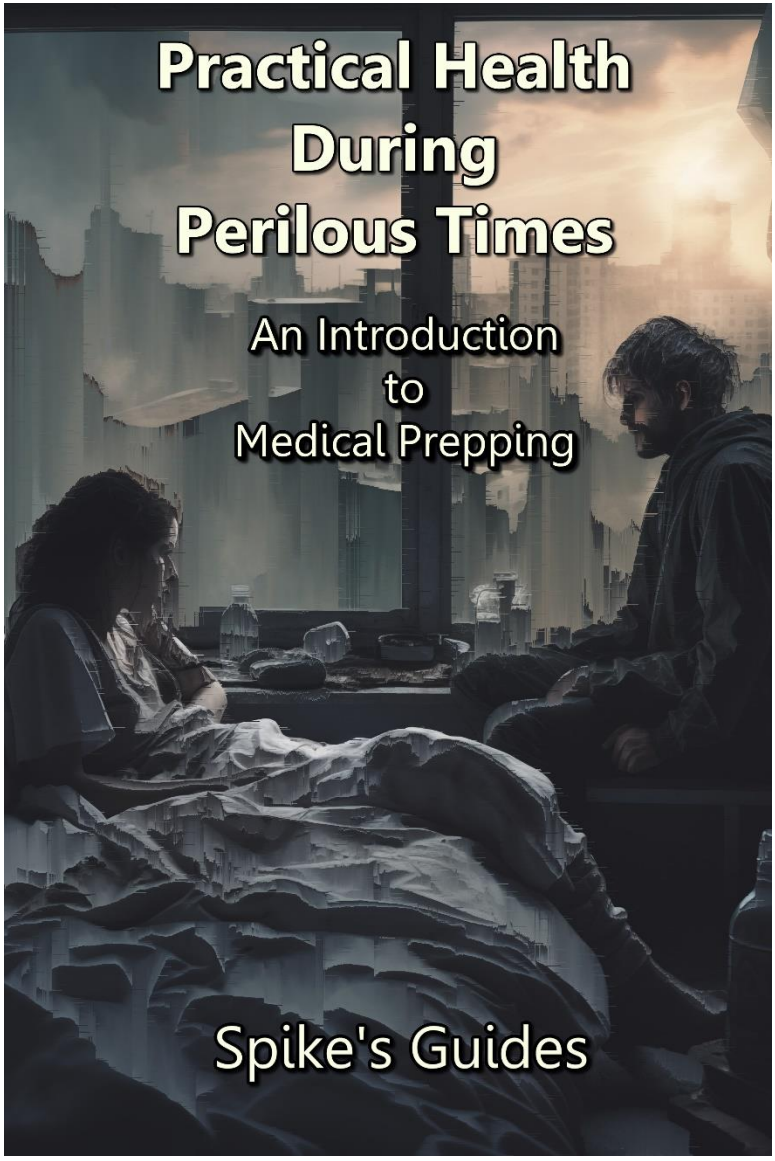
Practical Health
During
Perilous Times
An Introduction
to
Medical Prepping
Spike's Guides

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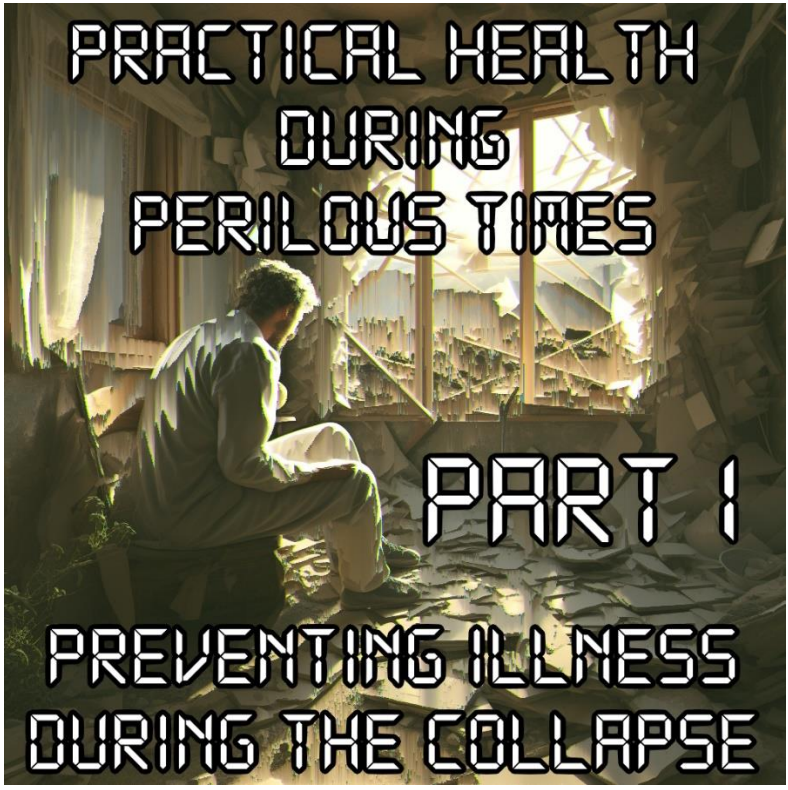
Introduction

This book or pdf (whichever you are reading) was initially conceived as a 6 part series of long form articles written to my twitter account (@spikesguides). This all started when someone suggested I write about the basics of infection control during a collapse scenario. It quickly spiraled out of control into this (comparatively) massive piece here. I found that I needed to lay groundwork to lay groundwork to lay groundwork to getting to the point where I felt that I could explain how to make use of antibiotics for infection control, much less flirt with the idea of making use of herbs. I also felt it would be appropriate to include a section on the basics of first aid as well since I was already discussing so much medical prepping related topics, it seemed fitting to include some basic first aid as well. I hope that this doesn't feel too disconnected and awkward as you work through this book. This is my first actual book in any form I have ever written, the closest I have gotten was a long report I did in high school but that stopped at 12 pages while this is sitting somewhere in the ballpark of 50 (according to MS Word at standard 8.5 X 11 size paper).

This book is not intended to be used a replacement for any kind of real medical treatment or knowledge. This is to be used as a platform for you to build upon. This book covers a little bit about a lot of things. This allows you to have a basic idea of the various topics within as you delve deeper into the realm of medical prepping and medical information in general. Think of it as a basic introduction to these topics. When researching any medical information there is always a plethora of vocabulary and topics that need to be understood to some degree to make sense of what you are reading. As an everyman, I felt that people like me should have an easy-to-read introduction to this in a way that did not require a massive textbook and 10,000 hours of studying.

I sincerely hope you enjoy reading this book and find it interesting as well as informative. If you are reading the PDF that I have distributed for free, and you can afford it, I ask that you purchase the book to help support me. This both helps me financially and it also sends a solid signal to me that there is genuine interest in my written work. Regardless of whether to buy or not, thank you very much for reading!


PRACTICAL HEALTH
DURING
PERILOUS TIMES
PART 1
PREVENTING ILLNESS
DURING THE COLLAPSE

Part 1 of 6: Preventing a Particularly Unpleasant Death

“A healthy man wants a thousand things; a sick man wants only one.” -Confucius

If and or when a disaster or collapse strikes, an often-overlooked element regarding survival is our health. It is one of the base elements of our lives and we regularly overlook it. But when professional medical assistance could be days away or possibly not available at all, what are some of the things that the average concerned citizen can do to prevent or help overcome illness.

Beginning with the first step of dealing with illness and infection is the most prudent step. Prevention. If you can prevent the problem, the problem never appears. Obviously, nothing is foolproof but within the last century, public health has improved greatly because of a number of factors but arguably the largest two have been cleanliness and food safety.

1A. Hygiene:

This means keeping yourself as clean as you do now to the best of your ability in a situation where things have deteriorated to a state of disruption. This includes keeping your body clean your hands clean, your mouth clean, and your (for lack of a better word) ass clean. I know this sounds like basic kindergartener level stuff, but it must be mentioned and addressed. We are accustomed to cleaning ourselves because of the scent but it is much more important to ensure we are removing dirt and bacteria that can cause illness. With washing your body, you are preventing a build up of oils and dead skin cells that can cause infection, you are lowering the risk of transmission of any microorganisms that you may have come into contact with unknowingly in the wild, and you are also killing off the bacteria that reproduce rapidly in dark, warm, wet areas; these can build up and cause skin infections which can be troublesome to treat when your medical supplies are not robust and you have to decide between treating your itchy fat folds or treating grandma's gangrenous foot.

Regarding oral hygiene, the goals are to prevent infections in your teeth. If you have ever had a tooth infection, you know the pain it delivers. Along with pain, it means you have an active infection that you need to remove promptly and, in a situation where medical aid

is not available, you are looking at 1800's dentistry options, pulling teeth. If left to rot, you risk the infection spreading into other parts of the head and risking the brain or even sepsis. Both can promptly lead to an early grave. Oral hygiene may be difficult to maintain during a collapse scenario, but every attempt must be made to keep it up. This can involve wetting the toothbrush with a miniscule amount of water, using toothpaste tablets, or in a worst-case scenario: chewing dental hygiene gum.

Lastly for the hygiene section I want to address wiping. Yes, poop is funny, ha ha, let's move on now. The fecal-oral route is a common route for many different bacteria, viruses, and some parasites. Without cleaning your bottom after having a bowel movement risks the bacteria to sit and fest and grow. If you are wiping without washing some capacity, you are then risking spreading God-knows-what to everyone in your community. Proper bathroom hygiene is important here. Keep it in mind. Don't be a modern Typhoid Mary.

Wrapping up hygiene, I want to also address cleaning your clothing. A good rule of thumb is, if it smells bad, bacteria are present. Where bacteria are present, the risk of illness and infection go up. Keep your clothing clean, or at least change them often. You can do things like wash tubs or even airing out in the sunlight if things are dire enough.

1B. Wound Care:

Accidents will happen. In any scenario where a doctor may be hard to come by, injuries are probably going to happen. I won't delve into splints and things of the type as it goes entirely outside of anything I am remotely knowledgeable on.

Following an injury that results in a wound, assuming that you are in a safe position to do so, the wound needs to be cleaned. Rapidly. Use clean water (not lake water or anything untreated. See my water article under the highlights tab on my twitter profile) to rinse the wound. If the wound is small, use soap and water to clean the area around the wound, not inside of it. Following this, it must be disinfected. This is where you can get a bit creative, ideally you can use things like antiseptic creams, solutions such as chlorhexidine, or iodine-based solutions. You can also make use of isopropyl alcohol and if things are bad enough, any liquor that is AT LEAST 60% ABV can be used in a pinch for disinfecting a wound, just know that the other ingredients in the alcohol can burn and cause more irritation in the wound, this is not recommended unless absolutely needed. You should avoid using hydrogen peroxide. I grew up being told to use it but recently I have heard the consensus has changed. An important

note, some people can be allergic to certain antiseptics. If you or a loved one are unsure if you are, maybe now is a good time to find out. Now that the wound is cleaned and disinfected, you need to stop the bleeding and elevate the wound. I am not talking about major wounds that involve stitches, in this case, that stuff is over my head, and I am not comfortable discussing it in detail. Stopping the bleed on a smaller wound though can be as simple as applying gentle pressure with a clean cloth or bandage to stop the bleeding. Once again, with major injuries, stopping the bleed is the first step and for that type of stuff see my IFAK article or just ask around on Twitter here, there are a lot of EMS types, and I am certain they are more than happy to fill you in. Next is dressing the wound. The wound should be covered in a sterile dressing such as gauze, non-stick pads, bandages, etc. The goal is to be using clean and new bandages here, reusing bandages is not a good idea and is practically begging for infection. Lastly, monitoring the wound for infection. These signs should be noted right away and be dealt with appropriately: increased redness, warmth, swelling, pain, pus, a fever appearing, chills and malaise. These symptoms are not exhaustive but are a good opening salvo of information to take in and commit to memory. I want to also mention here that for individuals who have diabetes or an immune system issue, they tend to heal slower and are more prone to infections and extra care and attention should be given

to these individuals.

Final note on wounds. If you are out of date on your tetanus shot, get it. Tetanus is not just the “rusty nail” disease either, it can be present in any puncture wound. That is WITH treatment. Tetanus is not a pleasant thing to go through, it can and does kill. With treatment it has a 10% kill rate. It is incredibly painful, your muscles will spasm and hold for a very long time. The disease has an incubation period of about 10 days. Throughout this series I will mention a few bacteria, viruses, etc. that are so terrifying that they get mentioned before the big list of common illnesses. This one of them. You can die and it will be extremely painful the entire time.

1C. Food Safety:

In any type of occurrence where medical aid may not be available, food safety is something that can be easily overlooked when accustomed to the modern lifestyle. Our perishables are cold, our cans are usually eaten before expiry, and they look fine. Our produce is always fresh. This may not always be the case. Foodborne illness can and does kill people every year, particularly in the developing world where doctors are not the most common commodity around. Obviously, each possible scenario has a million different permutations of ways to

approach this subject. If you live in Canada where its frozen outside for 8 months, cold food storage can be much easier than someone living in southern California. This piece is attempting to be as general as possible and will be giving some thoughts from that perspective. Feel free to give ideas and advice in the comments, though.

Perishable foods should be kept cold. If the power has gone out, keep the doors to the refrigerator and freezer shut for as long as possible. Any food that appears to have gone bad, throw it out. Do not risk eating that beef that sat in the lukewarm fridge for a week. A decent but not always super accurate test is the smell test, when pulled out, does it smell like rot? When cooking does it smell like rot? Once cooked does it smell like rot? It might not necessarily smell like rot, either. It might smell fruity, dry, musty, or just off in general. If that is the case, throw it out. Perishable foods can and will perish. A closed refrigerator should keep food safe for about 4 hours. Consider using ice or frozen gel packs to keep food cold for longer. A full freezer on the other hand can hold temperature for about 48 hours if unopened and a half-full freezer will hold for about 24 hours. If the power goes out and the situation is such that it won't come back for quite a long time, it might be wise to use the perishable goods first. Nonperishable goods should be kept in a dry and cool place. Moisture and heat are your

enemies here, molds and bacteria love those two delicious things. I also want to address botulism here. We often think of canned goods as completely safe but that is not always the case. If a can is dented, has any holes, or is bulging. Do not eat it. Botulism, particularly without medical intervention (and I mean serious medical intervention) will kill you. The bacteria that causes botulism releases a toxin that paralyses you. It begins in the face and throat and works it's way down. It usually does not cause fevers, but it will cause weakness and eventually paralysis of the muscles. You will die suffocating because you can no longer breathe. This is another one of those diseases that I want to mention. You will die and it will be very terrifying the entire time.

When cooking with perishable goods, particularly raw foods including vegetables, maintain your common food safety guidelines. Wash your hands often, prevent cross contamination with ready to eat foods. Clean and disinfect your cutting boards and utensils. This is common knowledge but should be mentioned. You do not want to die shitting yourself to death because you thought E. Coli was a meme.

Food that is cooked during this period of struggle should be cooked to completion. You may love your rare

steaks but when times are tough and taking a chance can mean putting your life on the line, you need to seriously make your decisions rationally. It might not be as tasty but risking foodborne illness goes up with undercooked, raw, or partially cooked foods. This includes eggs, too. I know this sounds overprotective but it's a big deal. The odds of salmonella from common USA purchased eggs that are made over easy are quite low but not zero. Be wise with your cooking.

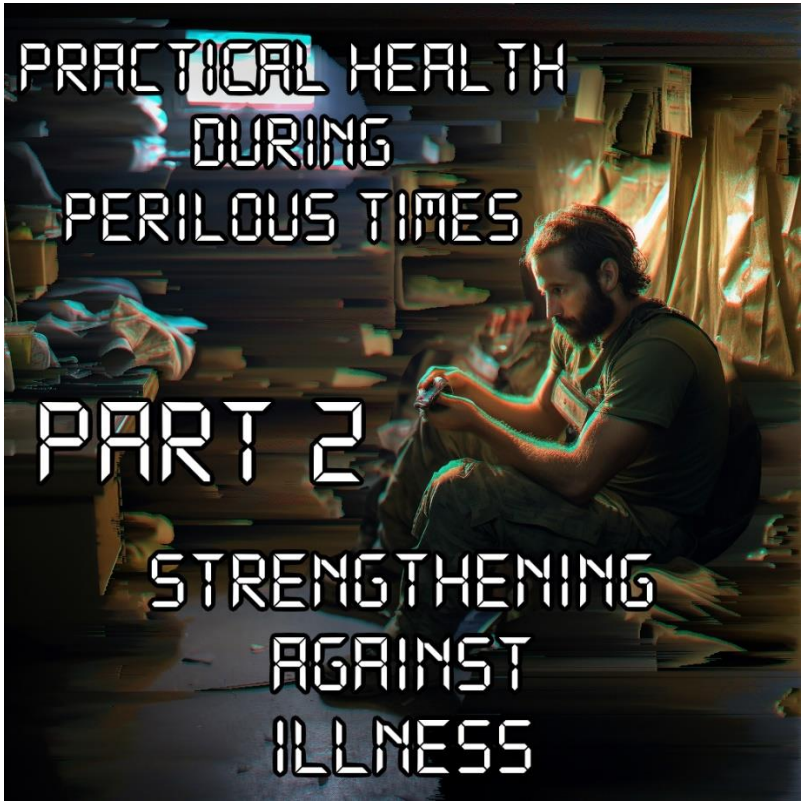
I just want to stress again, when in doubt on food safety, discard it. This includes perishables like meat, dairy, and produce as well as canned and dry goods. Survival is about risk calculations. Don't stack the odds against yourself.

A final note on cooking. Use clean water for cooking. Once again, common sense, but if it isn't mentioned, it can be easily forgotten (once again see my water purifying article). Just because you boiled the water to kill the microorganisms does not mean that the pollutants from your local pond aren't still there.

Part 1 Conclusion:

This concludes part one of the series. I know it is long and arduous and includes a number of common-sense stuff, but these things are imperative to remember in a situation when medical aid can be days away if available at all. Dying of something entirely preventable is a tragedy and should be something you actively strive against. It's not a matter of "being a pussy" or being a germaphobe. Pathogens are an unseen enemy that wage a war on us daily and for hundreds of generations in human history it has claimed our lives. Knowledge may be half the battle, but the other half is actively using that knowledge.

Act accordingly.


PRACTICAL HEALTH
DURING
PERILOUS TIMES
PART 2
STRENGTHENING
AGAINST
ILLNESS

Part 2 of 6: Preventing Illness

"*Health is the greatest possession. Contentment is the greatest treasure. Confidence is the greatest friend*." - Lao Tzu

While in part 1 we covered preventing infections, in this part we will cover a general overview on preventing illness. Infection generally refers to a harmful organism entering the body while illness refers to the state of being unwell. To better bring this difference to light, if you wash your hands before eating, you are preventing an infection. If you eat a healthy meal though, you are helping prevent illness. Preventing illness is generally about focusing on maintaining overall health and strengthening the body's immune system. In a situation where your doctor is not available, maintaining your health is more important than it ever has been in your entire life.

2A. Nutrition and Diet:

Nutrition is the base level for all health. Through what we eat we gain the vitamins, minerals, amino acids, and calories that keep us alive. The full list of nutrients you need to stay alive is quite long and full of words that to the average person do not mean much. Instead we will be focusing on the basics of dietary goals.

While it may not be entirely possible to have the ideal diet when in a collapse scenario, it is important to keep the guidelines in mind when selecting what you will be eating or how you will be rationing what you eat. As simple as this sounds, a varied diet is ideal. In a perfect world you would have a diet that is primarily rich in vegetables, whole grains, lean meats, sparing oils, healthy fats, and some fruits. All of these foods can provide essential nutrients such as Vitamins A, C, D, E, and zinc. All of which are absolutely critical for immune system function. With this in mind, in a situation where food may be more scarce, or most diets will be focused on nonperishable foods which are generally lower in nutrients, eating nutrient dense foods will be a priority. This includes canned fish and beans for protein, dried or tinned fruits and vegetables for vitamins, nuts for

healthy fats and calories, and fortified cereals and grains for calories.

I want to really stress the importance of Vitamin D and Zinc for a moment. While I don't want to cover most of the macro and micro nutrients because there are many of them and I am not very learned in them, I can attest to these two, particularly to those who live in the western hemisphere. In the West, we generally have very low Vitamin D levels. I have read many studies that have discussed the role of Vitamin D in the survival rates of various illnesses, particularly during the COVID-19 pandemic. There is a VERY STRONG correlation between patients who had adequate levels of Vitamin D and Zinc with having a positive outcome from viral illnesses. Most of those who had enough not only had higher recovery levels, they generally recovered faster. I am not a doctor, but I can say from information I have gathered from professionals that the Vitamin D levels the USDA recommends is not enough. The USDA recommends around 600 International Units per day of Vitamin D. I can tell you from personal experience that I have been told to take at least 2000 International Units (IU) per day of Vitamin D. While we get plenty of it from the sun, we aren't in the sun long enough and the amount of Vitamin D you need to consume to get kidney stones is quite a bit. Don't overdo it obviously, use common sense here, but you can have more than the

government says you should have. Vitamin D plays such a vital role in the immune system, I advise if you are curious to look at the videos from Dr. John Campbell on YouTube who has covered this in depth through discussion with senior medical doctors across the globe as well as digging into research papers that have studied it. It isn't a miracle cure-all, but it would not make sense to not optimize your immune system. Vitamin D also plays a significant role with various mental illnesses but I don't want to cover that in depth here right now. Just know that you are probably not getting enough Vitamin D and you can get a year's supply for a very low cost.

Speaking of supplements in general, getting on and having a supply of a daily multivitamin is also a wise idea. It can supplement what you may be lacking in your daily diet, this can be a lifesaver if you are stuck in a basement eating spam and baked beans all day (not that I would recommend you do that). But if you are primarily eating calorically dense foods that are not very nutritious, a multivitamin can greatly improve your general diet.

Lastly for dietary related information, I want to discuss calories. I just want to list the caloric needs for men and women in their 20s to 30s at various activity levels. These levels will be sedentary (little to no exercise), moderate activity (activity accounting to about walking

1.5 to 3 miles a day), and active (3 or more miles of walking a day or other activity).

Men:

Sedentary: 2400-2600 Calories

Moderately Active: 2600-2800 Calories

Active: 3000 Calories

Women:

Sedentary: 1800-2000 Calories

Moderately Active: 2000-2200 Calories

Active: 2400 Calories

Obviously this is not a perfect science and there is wiggle room. If you are running marathons on the daily, you probably need more. Also there are floors to these values as well, to maintain your basal metabolic rate (the minimum needed to not hurt your body), eating less than this can cause short and long-term bodily harm in many forms. For men this is 1500-1800 calories and women it is generally 1200-1400 calories.

Maintaining a healthy diet will be the head cornerstone of your health. Look at the people you know in your life who eat like garbage, how often are they ill? How often do those who are super healthy about their diets? If you want to keep an engine running well, you run the fuel that it is rated for, sure you can run your car on alcohol but it won't last for very long. Keep that analogy in mind. Keep yourself operating at maximum efficiency.

2B. Hydration:

Staying hydrated is strongly associated with strong immune system responses as well as maintaining homeostasis in your body. Without delving too deeply into the subject, ensuring you are drinking enough water is paramount to your overall health. We all know the classic "you die after 3 days of no water," mantra. It is true and it is important that you don't stop drinking water, but skipping out on water will keep you feeling fatigued as well as weakening your immunity. Where you live and your activity level will greatly impact your liquid needs but generally you should be shooting for between 3 and 4 liters of clean water per day. Clean water is obviously a major importance here, drinking contaminated water is a great way to get and spread illnesses amongst your community. Luckily I have written on this in the past, look at the highlights tab on

my twitter profile and find my article on various water filtration and disinfection options.

A general rule of thumb when it comes to hydration is that if you feel thirsty, drink. Your body is very good at keeping you hydrated and you need to listen to it. Don't overdo it, hyponatremia, or water intoxication can kill you because your electrolyte levels get disrupted and can cause injury or death.

2C. Mental Health and Stress Management:

This will be a very short section. I wrote an article on this. It was one of my worst performing ever because everyone thinks they are tough. Go read it, it is in my twitter profile highlights. Chronic stress can weaken the immune system and your mental health does influence your physical health. Your body is not an island and your mind another, they are intertwined. Western medicine tends to forget that the two are deeply connected. Don't ignore this aspect of your health.

2D. Sleep and Rest:

Sleep is a vital part of the body's repair process and is a primary component of a healthy immune system. During sleep, your body produces cytokines, a type of protein that assists the immune system with fighting inflammation and infections. When you lack adequate sleep, your body will produce less antibodies, cytokines, and white blood cells, all making you more susceptible to illness.

Along with this, sleep also helps with your mental health. Lack of sleep can greatly exacerbate or bring on symptoms of anxiety and depression. Studies have shown that there is a link between chronic sleep deprivation and higher rates of depression and anxiety disorders.

As common sense as it sounds, as with much of this article, maintaining a healthy sleep life will help maintain your mental and physical state.

2E. Physical Activity:

Another short section, physical activity is an integral part of bodily health. It keeps not only your energy levels high, keeps your muscles strong and ready when needed, and helps maintain cardiovascular health, it also plays a role in the immune system as well. It has been shown that people with active lifestyles tend to have stronger immune systems than those who are

more sedentary. Even if you are trapped inside, say during a health lockdown, you can do exercises such as weightlifting, push ups, sit ups, running on a treadmill, burpees, and various stretch related exercises such as yoga.

2F. Environmental Factors:

This section will be a bit different and focus more on avoiding something that could be detrimental to yourself. Depending on where you live, you will need to be aware and alert of various illnesses that may be endemic to your area. This requires more research on your part but if you are in a situation where the rule of law is basically gone for an extended period of time and medical care is basically nil, you must know what to avoid and how to avoid it. Do some research on what illnesses are around your area now via your local government and college's websites.

For example, if you live in Wisconsin and plan on eating local game, finding the prevalence of Chronic Wasting Disease in deer and how to identify it. Also identifying if your kill has Tuberculosis (TB) or not, can be the difference between dying like Arthur Morgan or not.

Also look into if there are any prevalent diseases from pests. Do you have Rocky Mountain Spotted Fever issues from the local ticks? Do your mosquitos carry West Nile? Is there a big issue with rabies in your area? Identifying possible threats and how to proactively approach them is the best way to deal with these issues.

Any good plan of attack for a squad involves having an idea of the strength of their enemy as well as where they might be. Treat infectious diseases the same way. As mentioned in the previous section, microorganisms are waging war on us, luckily they are generally slow to change and adapt so we can usually adapt well ahead of time. Keep this in mind. Gathering intelligence is a key aspect in military actions and should be an aspect of your war against invisible death.

2G. Vaccinations:

This is probably going to induce some skepticism and debate in some, that is okay. If you think it is all hogwash, you can completely ignore this section.

For those who are still interested, vaccinations have been one of the biggest wins we have had in public

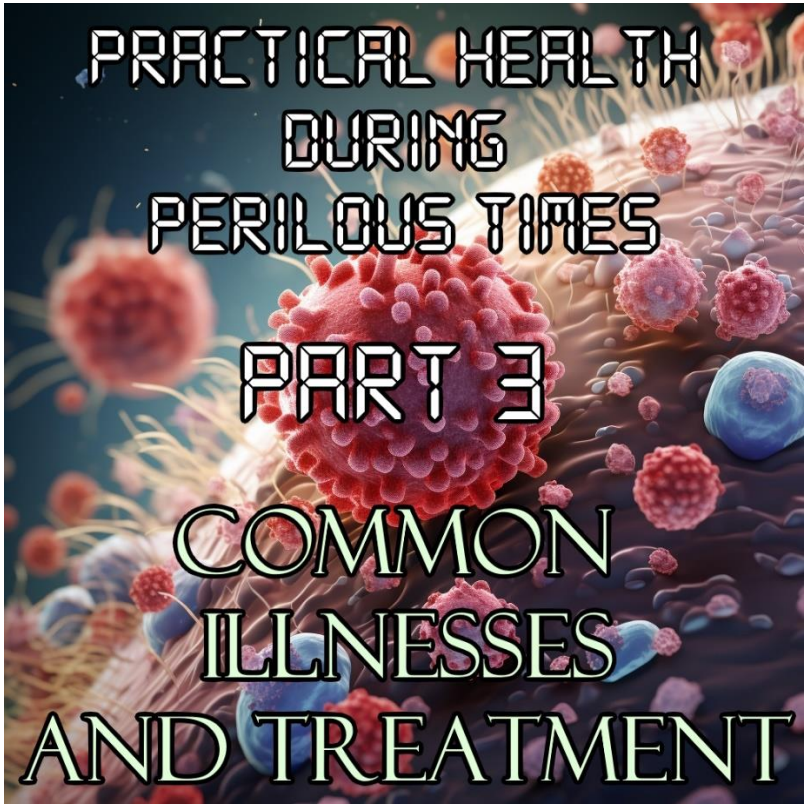
health in the last 100 years. I am not going to comment on a certain vaccine relating to a virus that appeared in the last 4 years, that is a different discussion for a different day. Right now I am talking about traditional vaccines.

Being vaccinated now can pay dividends later. Luckily there are many vaccines we can get that will maintain immunity for a relatively long period of time. You can get vaccines for many commonly communicable disease such as shingles, the flu, HPV, Meningococcal Disease (bacterial brain infection), Tetanus (see part 1 for that), and Hepatitis A and B. You can also get a series of pre-exposure prophylaxis injections for rabies. It does not eliminate the need for additional medical attention after a potential rabies exposure, but it will simplify treatment and provide some level of protection. Travel medicine doctors now will usually offer vaccines for just about anything that you can get on the market. Do research and discuss with a medical professional your concerns. Just know that vaccines do have side effects, almost always they are minor and temporary, just do ample research before you make any medical decisions.

Conclusion of Part 2:

Preventing illness when laid out like this can seem difficult or overwhelming but in practice, this stuff can become routine. Getting used to a new diet, taking a multivitamin, or starting a workout regime can be annoying at first but with time will become second nature. The small investments in your health that you make starting now can save you later when you need it. If you find yourself in a situation where a common fever no longer seems like a nuisance but instead becomes a source of existential worry because of lack of medical access, you will thank yourself then that you prepared just for this. Your health, both physical and mental, is just as important as finding food and safe water. Keep it in mind.

Act accordingly.


PRACTICAL HEALTH
DURING
PERILOUS TIMES
PART 3
COMMON
ILLNESSES
AND TREATMENT

Part 3 of 6: Common Illnesses and Treatment

"*Healing is a matter of time, but it is sometimes also a matter of opportunity.*" — Aristotle

Now that we have established the basics of how to avoid infections and illnesses, we need to now address several common illnesses and treatments that can be done by the average individual. We will be covering what these infections are, identifying them to the best of your ability, and the appropriate course of action to take. As much fun as it would be to list anything and everything that could happen, instead we will cover just some of the more common infections and illnesses that people can contract. The goal is not to be exhaustive but to give a general understanding of the topic.

Short note: I will not be discussing exact antibiotics in this section. I want to cover specific antibiotics in part 5 of this series.

3A. Recognizing Serious Conditions:

Prior to delving into the meat and potatoes of this article I want to begin with recognizing serious conditions. Not every illness and infection can be solved at home, some of them require serious medical intervention. If you find yourself in a survival situation and these symptoms arise, it is imperative that professional medical aid be sought out immediately. There are too many serious issues occur to cover them here so instead we will cover 5 relatively common medical emergencies.

First and foremost, the most likely medical emergency that can arise that would be entirely unsuited to be treated at home would be appendicitis. Appendicitis is inflammation of the appendix from bacteria, it will continue to swell until bursting after which sepsis and death will set in rapidly. Appendicitis has a typical presentation with pain beginning around the navel and then shifting to the lower right abdomen and intensifies over a few hours. Along with pain, nausea, vomiting, fever, and loss of appetite have been noted. Once appendicitis is suspected, medical aid must be located rapidly to help ensure a positive outcome.

Heart attacks are a common heart disease that hit almost 800,000 Americans yearly. Heart attacks without

intervention greatly increase the likelihood of perishing as well as reducing the risk of permanent heart damage. Common symptoms for heart attack are chest pains and discomfort that may spread to the arms, back, neck, jaw, or stomach. The pain has often been described as if there is an elephant sitting on your chest, crushing you. Other symptoms can appear such as shortness of breath, cold sweats, nausea, or lightheadedness. Symptoms can vary and sometimes heart attacks occur without clear warning signs, it is best to err on the side of caution.

Strokes are another common medical emergency that requires immediate medical attention. Remember the word FAST. F for face drooping, A for arm weakness, S for speech difficulty, and T for time to find a doctor. FAST is a helpful way to identify a stroke rapidly in yourself or others. Other symptoms can appear such as sudden numbness, confusion, difficulty seeing, difficulty walking, or severe headache. Strokes can vary greatly with their symptoms and it is best to err on the side of caution. Seeing a medical professional and getting treatment is imperative to prevent death or further brain damage among other complications.

Internal bleeding is a specific type of bleeding that is exactly how it sounds, you are bleeding internally. It can

be a result of trauma, a medical condition, and some medications as a side effect. Internal bleeding brings the symptoms of severe pain, particularly in the abdominal area, fainting and dizziness, weakness, rapid heartbeat, low blood pressure, shortness of breath, cool or moist feeling skin, or a pale appearance. This condition is another condition that you cannot treat at home in any way that is effective. Failure to treat it is another case of early grave. Once again, if you suspect internal bleeding in a collapse scenario, find a doctor or some other medical professional rapidly.

The last medical emergency that is relatively common that I want to mention is sepsis. Sepsis is what happens when an infection, of any kind, leaks from the sites of infection and enters the bloodstream. The body responds rapidly to the infection with a high or low body temperature, a rapid heart rate and breathing, confusion and/or disorientation, extreme pain or discomfort, and clammy or sweaty skin. Sepsis is a serious medical condition and with early intervention and identification can be stopped. Without it, the sufferer will pass shortly. Treatment for sepsis usually requires IV drugs, this is not something you can take a few penicillin pills to treat.

My intention is not to draw undo fear into the minds of anyone attempting to prepare for any sort of disaster, I want them to be aware that just because you have some knowledge and supplies, you are not invincible. A medical professional is needed in the case of many serious illnesses and diseases. With each illness I mention going forward I will include a section regarding when seeking professional help is a good idea. While this seems antithetical to prepping, you cannot do everything.

3B. Respiratory Illnesses:

Beginning with the most common illnesses that the average person is likely to encounter, respiratory illnesses. The average person deals with about 2 to 4 colds per year. You also are likely to encounter the flu every year as well. Respiratory illnesses are very communicable and easily spread amongst people rapidly. Respiratory illnesses can also encompass more serious illnesses like bronchitis or even pneumonia.

Beginning with common seasonal influenza and colds, the average person's best course of action is rest, hydration, good nutrition, and sleep. It's like everything your mother taught you when you were sick in high school. It is the same thing. Obviously, the flu is much

different than the common cold in severity. Extra care must be taken when influenza is suspected to ensure that the individual who has it is able to recover more effectively. We all know the telltale signs of colds and flus, coughing, feeling icky, malaise, tiredness, fevers, chills, sometimes vomiting and nausea as well.

Sinus infections are also a very common infection of the upper airways. Symptoms include bad breath or loss of smell, cough, fatigue, fever, headache, pressure0like pain, pain behind the eyes, toothache, or tenderness of the sinus area of the face, sore throat and postnasal drip, and nasal stuffiness with and without discharge. Most sinus infections are fully viral in nature. The general rule of thumb in medicine is that if the sinus infection continues longer than 10 to 14 days, it most likely is bacterial in nature and a short course of antibiotics may be in order.

With regards to more serious sicknesses, beginning with bronchitis, bronchitis is a condition that develops when the airways in your lungs, also called the bronchial tubes, get inflamed and cause heavy coughing. The coughs may be productive and bring mucus of white, yellow, gray, or green colors. It also can manifest with fatigue, shortness of breath, fevers and chills, and chest discomfort. The cough can stick around for weeks even

after all other symptoms disappear. If there is a wheezing or whistling sound that comes from the chest when breathing, it can be a sign of bronchitis, especially following a recent upper respiratory infection.

Luckily, most bronchitis cases are viral and do not require antibiotics as an antibiotic won't be effective against viruses. If the symptoms are severe and last more than three weeks, or if the patient is at risk of developing a pneumonia (the elderly or immune compromised when sick with bronchitis) should consider the possibility of bacterial infection and consider taking a course of antibiotics. The patient should be monitored closely, if their symptoms appear to worsen or new symptoms appear, it could indicate the development of pneumonia.

With regards to viral bronchitis, rest and hydration are key to recovering. Use of a humidifier can help ease coughing and loosening mucus. The patient can also drink hot tea and hot soup that is steaming to help encourage inhaling of the steam. In an absolutely worst case scenario, boiling water and having the patient sit over the pot and inhale the steam can be done.

For the last entry under respiratory illness is pneumonia. Pneumonia is when an infection inflames

the air sacs in one or both lungs. They inflame and can fill with fluid. Penumonia symptoms can vary but generally include a cough which may produce mucus of various colors or even bloody mucus along with fever, sweating, chills, shortness of breath, sharp or stabbing chest pain that worsens when breathing or coughing, fatigue and loss of appetite. One of the common ways a pneumonia can be diagnosed is with an x-ray and looking for white spots in the lungs. Obviously the average prepper does not have an x-ray machine at home so they will need to use other tools for diagnosis. Obviously, they can identify the symptoms but also they can listen to the chest of sick individual and listen closely for an audible crackling, wheezing, or rumbling sound in the chest upon inhaling. Risk factors should also be taken into consideration as well, determining if the patient has a cold or flu recently which can cause pneumonia, if they have a weakened immune system, or if they are obese or malnourished. All of these risk factors can help determine the likelihood of the sickness being pneumonia along with determining the level of caution and concern with the sick individual.

Without medical testing it is nigh impossible to determine if pneumonia is viral or bacterial. Generally, bacterial pneumonias come on more suddenly and more severely than viral pneumonias. If the pneumonia is suspected to be bacterial based on symptoms and

risk factors, they should be used in this case. Following this, watch for improvement, if there is no change within a couple of days after beginning antibiotics, this indicates that either the individual has a drug resistant pneumonia, viral pneumonia, or another underlying issue.

Supportive care for pneumonia generally means that the individual has plenty of rest, hydration, and the fever is contained if it gets higher with use of OTC pain and fever relievers. It is also suggested that practicing of deep breathing and coughing exercises can help loosen the mucus and help expel it from the lungs.

With regards to both bronchitis and pneumonia there are a series of symptoms that if they manifest mean that the situation is dire. If these symptoms occur, seeking a medical professional is ideal. If the individual has trouble breathing, coughs up pure blood, shows signs of low oxygen levels in their blood (blue lips, blue face, blue tinged extremities), a high fever, or extremely severe chest pain. All of these can indicate that the infection is taking a very serious turn that may be outside the ability of the average person to treat.

3C. Gastrointestinal Disorders:

Gastrointestinal disorders, issues relating to the digestive system can cause serious issues, particularly when they run out of control and risk dehydrating the unlucky sufferer. Diarrhea is one of the most common causes of death in the world annually and tends to be a common symptom for these illnesses. While it is an irritation for us now, if the world that we all know and love collapses, diarrhea risks being a serious issue if it continues and does not stop.

Beginning with the most common form of gastrointestinal distress in the Western world, is food poisoning. Food poisoning is a very nebulous term for a large number of viruses, bacteria, and parasites. The most common symptoms of food poisoning are nausea, vomiting, diarrhea, and abdominal pain. The beginning of the sickness depends on the specific cause of the sickness. For the most part, these sicknesses with resolve without any treatment aside from standard home care. Antibiotics are generally not needed but some causes, such as Salmonella may require them if the symptoms do not clear up or they become extremely intense.

Home care for food poisoning is fairly streamlined. Rest and hydration are the first and foremost important things to do. As symptoms begin to improve, easy to digest foods can be introduced. These can be things like soups, breads, toasts, fruits like bananas, and rice.

If the symptoms do not improve or become bloody, the sufferer is extremely dehydrated, or spikes a very high fever, the situation has become dire and seeking of a medical professional is imperative.

Viral gastroenteritis, also known as the common stomach flu can spread amongst communities rapidly and be debilitating for a few days as it runs its course. Viral Gastroenteritis brings general symptoms of diarrhea, vomiting, stomach cramps, and occasionally fever. Antibiotics would be ineffective as it is viral in nature and the illness needs to basically just run its course with supportive home care in the form of rest and hydration.

Lastly for this section I want to talk about something that isn't usually directly caused by bacteria or viruses, gastritis and ulcers. Gastritis is irritation of the stomach lining and ulcers are a sore on the stomach lining. Similar but slightly different. Symptoms of these include burning stomach pain, bloating, heartburn, nausea, and

sometimes vomiting. Occasionally when this occurs, one can produce black poop or red vomit. If this happens, it means that there is bleeding in the upper digestive tract. For the most part, treatment of these requires avoiding acidic, spicy, and fried foods while taking OTC antacids or stomach acid reducers for a period of time until the stomach heals. Occasionally, the bacteria H. Pylori can cause ulcers and is treated with antibiotics.

3D. Skin and Soft Tissue Conditions:

The skin is the largest organ in the body and is not immune to infectious conditions. This section will be the most varied in issues because the skin can be susceptible to viral, bacterial, environmental, and fungal related problems.

Beginning with common viral skin conditions, two common issues that can arise within this category comes in two flavors, minor and serious. Beginning with minor is warts, warts are skin growths on the hands and feet and can be a real nuisance. They can come from people with compromised immune systems as well as from individuals with extremely dry skin and in some cases even arising from stress. Warts are usually caused by HPV, the human papilloma virus. Warts can

be painful or itchy. Itching them can make them raw and spread more warts to the hands. They are easily removed either with liquid wart remover and time or by freezing them with a home wart freezer, usually a compressed dimethyl ether. If cryotherapy is used, with enough time they will die and will be removed as dead skin. Warts are relatively harmless but can be annoying.

Shingles on the other hand is a fairly serious condition if it strikes. Generally, it only happens to individuals over 50. Shingles is a painful rash that is typically on one side of the body or face. If the pain is severe or near the eyes, finding a medical professional would be ideal. For both of these conditions, use of pain relief measures with cool compresses and calamine lotion can help. Unfortunately, antibiotics do not help with either of these conditions, but some antivirals do exist for shingles use in extreme cases.

Bacterial conditions in the other hand, can be treated with antibiotics. These are bacterial cellulitis and impetigo. Cellulitis is a common skin infection that is marked with redness, swelling, tenderness and warmth. It can spread very rapidly. The effected area should be kept clean and cold compresses applied to reduce pain and swelling. Oral antibiotics are generally used for treatment as well for this. Impetigo on the other hand is

highly contagious and is characterized by red sores, particularly around the nose and mouth, they then burst and form a yellow-brown crust. Gently washing the sores with soap and water is essential. Impetigo is sometimes treated with topical antibiotics or oral antibiotics. With both of these infections, if the area is rapidly expanding and/or accompanied with a fever, the situation is getting severe and consultation with a medical professional would be ideal.

Next are fungal conditions. This will encompass athlete's foot, ringworm, and yeast infections. Athlete's foot affects the feet, particularly between the toes and produces an itchy and scaly rash. Ringworm also produces an itchy and scaly rash and is circular in nature. It often appears as a raised, red, circular, crusty rash with clearer skin in the middle. Lastly are yeast infections of the skin, these usually appear in warm, moist areas of the body and produce a red and itchy rash. For all three of these, over-the-counter antifungal creams and powders can help. Treatment for these usually requires antifungal medications.

Regarding environmental causes of skin issues I want to talk a bit about pressure ulcers and bedsores. These are sores that develop from prolonged pressure, common in people who are immobile for long periods of time.

They can be prevented with regular repositions and keeping the skin clean and dry as well as use of special cushions or mattresses that relieve pressure. If the sores appear infected (see part 1), antibiotics may be necessary to remove the infection.

Lastly I want to talk a bit about abscesses and staph infections. Abscesses are swollen, painful areas that are filled with pus that form from bacterial infection. Warm compresses can help assist with drainage, these should not be punctured or drained on your own. If the abscess is severe or not resolving on its own, antibiotics may be used. Finally is Staphylococcus, or staph infections. These are infections that can range from minor skin irritation to serious infection. The symptoms can vary depending on the type of infection and can include boils, impetigo, cellulitis, sores, and more serious conditions like MRSA. Look for signs like redness, warmth, swelling, pain at the infection site, pus, and general drainage. The area should be kept clean and covered, particularly if there is drainage. Use of warm compresses can help reduce pain and swelling and promote drainage. Minor staph infections may not require antibiotics and heal on their own, others may need antibiotics. Some infections like MRSA are resistant to common antibiotics and require specialty ones that make treatment more complicated. If the infection is a large, painful boil or produces other severe

symptoms such as a fever, a large area of infection or redness, or the infection is spreading rapidly, finding a medical professional would be advised. Immediate care is required for signs of systemic infection like high fevers, chills, or muscle aches as this could indicate sepsis.

Keeping your skin clean and using proper wound care is generally enough to prevent almost all of these aside from warts and shingles. Luckily though, the different issues that can arise are fairly easy to differentiate between and make treatments, for the most part, straightforward.

3E. Urinary and Reproductive:

The urinary and reproductive systems are often overlooked by the common person as areas that could have issues arise from them until they appear. Once they occur, to someone who is not aware of what it could be, it can be very stressful and worrisome. While much like the rest of the body there are many things that could be up, we will cover the primary ones. We also will not be covering STIs/STDs if you need a guide on that, let me know, condoms help prevent those, though.

Urinary tract infections (UTIs) and bladder infections are generally more common in women than men but are not unheard of in men. Commonly they appear with symptoms such as a frequent urge to urinate, a burning sensation during urination, cloudy or strong-smelling urine, and pelvic pain. They may also cause lower abdominal pain and a feeling of pressure. Water intake should be increased to help flush out bacteria, caffeine and alcohol should also be avoided as they can irritate the system. Personal hygiene must be maintained as well during this period to prevent encouraging more growth of bacteria. Typically antibiotics are used for treatment. If symptoms include blood in the urine, sever pain, fever or worsen despite treatment, a medical professional should be sought out as the infection could be getting worse or spreading to the kidneys.

Kidney infections usually carry the same symptoms as UTIs but also include back pain, particularly near the kidneys (just under the ribs), chills, fever, nausea, and vomiting. The pain usually occurs on one side and can radiate to the groin area. Kidney infections should have the same home management plan as UTIs but generally are treated with a longer antibiotic course. Early treatment is imperative with kidney infections to help prevent complications and kidney damage. If the individual suffering has a high fever, severe back or side

pain, confusion, disorientation, persistent nausea and vomiting, or bloody urine, a doctor should be sought promptly.

Lastly are yeast infections. Yeast infections of the urinary area, much like yeast infections of the skin are fungal in nature. They can be identified by itching, burning, discomfort during sexual intercourse, and a thick, white discharge. There are over the counter antifungal creams and suppositories available. If symptoms persist, antifungal medication may be used. Probiotics can be used to help prevent future recurrences. Obviously, if symptoms persist or are getting increasingly worse, medical attention is required.

3F. Ear and Eye infections:

The eyes and ears are our primary connections to the outside world and their proper functioning is primary to our well-being. I won't be discussing the types of illnesses that could rob one of their vision or hearing (unless they do not solve the minor infections). For things like that, you might be well suited doing your own research, my goal here is to cover the most common types of infections for the average person.

With this in mind, lets begin with conjunctivitis, pink eye. Every child's bane. It can be caused from viral, bacterial, and allergic sources. Symptoms generally include redness, itchiness, tears, and discharge from the eye. For viral or allergic conjunctivitis, warm compresses and OTC antihistamines can help greatly. For bacterial conjunctivitis, antibiotic eye drops may need to be used. Without lab testing it is difficult to determine exactly the cause, but bacterial conjunctivitis can be accompanied with mild pain and sensitivity to light but generally does not involve significant itching. The swelling and redness in bacterial conjunctivitis is usually more pronounced as well. The eyelids can be swollen and the area around the eyelid can feel warm. If the pain becomes extremely intense, light sensitivity becomes strong, or vision is impacted, medical aid should be sought out promptly.

Styes (Hordeolum) may sound like an alien word but it is a sore or red lump found near the edge of an eyelid, either the top or bottom. It is generally a bacterial infection caused by staphylococcal bacteria. The lump is generally filled with pus and resembles a boil or pimple. Warm compresses several times a day to help promote drainage and healing is usually enough to treat the issue. Do not squeeze or pierce the stye, you will risk hitting your eye. It can be treated with antibiotics if

severe or is not responding to standard compress treatment. If it becomes increasingly painful, impacts vision, or leads to swelling of the entire eyelid, a medical professional should be located.

Finally are common ear infections (otitis media and extrena) or middle and outer ear infections. Both are categorized with ear pain, occasionally fluid drainage, fever, or a feeling of fullness and pressure in the earl. Otitis externa also includes itching and swelling in the ear canal. Not all ear infections require antibiotics. If symptoms are severe or persistent antibiotics may need to be used. For otitis externa, antibiotic ear drops may also be used. With otitis externa, keeping the ear dry is important. Help should be sought if the symptoms include severe pain, hearing loss, dizziness, swelling around the ear, or symptoms persisting despite treatment.

3G. Vector-Borne Illnesses:

Finally we reach the final section of illnesses I want to cover in this post, vector-borne illnesses. This means diseases that arise from blood-feeding insects. Some of these may be only relevant to certain areas but as climate change continues to happen, we may see them

spread and thus become more relevant to more people, so they will be mentioned here.

Lyme disease, the bane of the average Midwesterner. Lyme disease is caused by a bite from an infected dear tick. The dear tick is much smaller than the standard dog tick and can be difficult to locate. Following a bite, a bullseye-shaped rash will appear near the bite location. This will be followed by flu-like symptoms, joint pain, and fatigue. The best course of action following a dear tick bite is to watch the area, if the ring does appear, a short course of antibiotics can be very effective at preventing the worst of the disease. If symptoms worsen and spread to the joints, heart, nervous system, or the rash expands, medical treatment is needed. The best way to deal with Lyme disease is to prevent tick bites and prophylactic antibiotic use.

Dog ticks, the larger and more common cousin of the dear tick is a common carrier for Rocky Mountain Spotted Fever. Early signs of this dangerous disease are fever, headache, abdominal pain, vomiting, muscle pain, and a distinct rash developing later. Early antibiotic treatment is imperative for a successful outcome with this illness. Ideally, antibiotic treatment should begin within the first 5 days of infection. If RMSF is suspected, even if antibiotics are taken, seeking

medical attention is important to do as RMSF has a very high potential for severity.

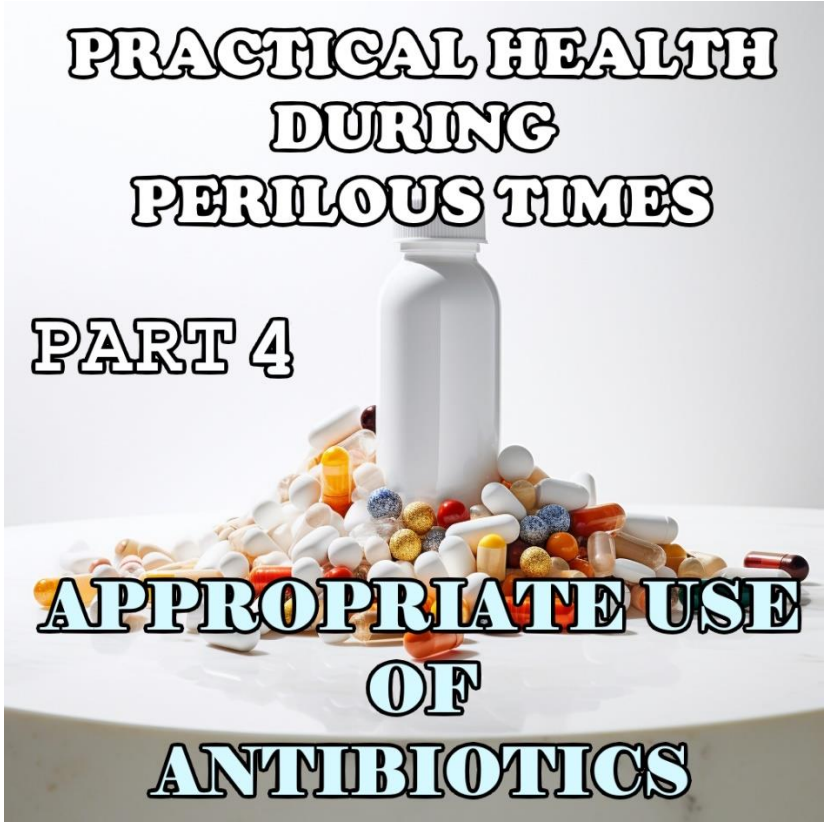
Unlike the last two, West Nile virus is caused by mosquitos. Most cases of West Nile Virus are asymptomatic in nature and cause no issues. If symptoms do appear, they can be in the forms of fever, headache, body aches, joint pains, vomiting, diarrhea, or rash. The virus also has the potential to cause severe headache high fever, neck stiffness, disorientation, seizure, muscle weakness, or paralysis. If ANY of these occur, seek a medical practitioner promptly.

Part 3 Conclusion:

Finally we reach the end of this article. This is the longest article I have written and will probably be the longest in this series. I apologize for the length but at the same time I lament I am not able to cover more just because of how many diseases one may commonly encounter and deal with during a crisis where medical care is difficult or almost impossible to locate. Don't treat this as gospel though, cross reference everything here and use it as general guide that you can then use to dig into more thorough and in depth research and plans. Also take note that many of these illnesses similar illnesses and can be difficult to diagnose without proper

medical education or tools. With all of that in mind, this is a solid first step for planning your disaster preps for some of the most common medical issues that can arise.

Act accordingly.


PRACTICAL HEALTH
DURING
PERILOUS TIMES
PART 4
APPROPRIATE USE
OF
ANTIBIOTICS

Part 4 of 6: Appropriate Use of Antibiotics

"*Medicine is a science of uncertainty and an art of probability.*" — Sir William Osler

Antibiotics are a miracle of modern medicine, without them, millions of people would die every year from infections that we could only help with supportive care. Unfortunately, antibiotics are not a cure-all and are not effective in all uses. As established in the previous article, not every infection can be treated with antibiotics. Antibiotics should be used judiciously and if misused can cause much more harm than good.

4A. Understanding Antibiotics:

Antibiotics are a class of medications that are used to treat bacterial infections. They work by killing bacteria or preventing their ability to grow and reproduce. Some antibiotics have anti-inflammatory properties as well but their primary use is against bacterial infections.

Antibiotics are only effective against bacteria and will do nothing to colds and other viral illnesses.

Antibiotics work in a few different ways but I do not understand the pharma-chemical information to really relay their abilities on that level. From a 1000ft view though, they can work by damaging the cell wall of bacteria, some interfere with their ability to replicate their DNA or even their ability to produce vital proteins. Different antibiotics will have different spectrums of activity. There are broad spectrum and narrow spectrum antibiotics. Broad spectrum antibiotics can work on a wider range of bacteria. For example, Augmentin, a penicillin based antibiotic can be used to treat strep throat, sinus infections, staph, and more infections. Generally these types of antibiotics are used first to treat an infection and if the infection fails to clear up, stronger and more narrow spectrum antibiotics are used. As a perfect example for narrow spectrum antibiotics, Dificid is a fairly recently developed antibiotic that is used to treat C. Diff (we will discuss this infection later) and is only rated to treated that specific bacteria at this point and nothing else.

Along with spectrums of activity, there are classes of antibiotics. Basically, this describes their chemical structures that make them up. The classes are as

follows per the CDC, "penicillins, fluoroquinolones, cephalosporins, macrolides, beta-lactams with increased activity (e.g. amoxicillin-clavulanate), tetracyclines, trimethoprim-sulfamethoxazole, lincosamides (e.g. clindamycin), urinary anti-infectives, and other antibiotics." Each class has different mechanisms of action, much like how we mentioned briefly earlier. If you are curious about these different mechanisms and which class works which way, I advise looking into the CDC website for classes of antibiotics. They have wonderfully clear documentation explaining it for the common man.

4B. When to Use Antibiotics:

This section will be quite short in nature. I want to just really stress that antibiotics should only be used when a bacterial infection is suspected. Once again, using an antibiotic against a viral or fungal infection will be ineffective. It is best to use the appropriate treatment for the infection that someone has. This ensures both that the issue is treated but also it helps prevent antibiotic resistant bacteria from forming as the evolutionary pressures of antibiotics are not there (this also can be caused by not using antibiotics for their full length of course and leaving some infection alive and behind but we will discuss this later). Appropriate

antibiotics use also helps prevent unneeded side effects from taking antibiotics, this can be mild in the form of stomach upset or more serious such as vomiting and diarrhea or even formation of C. Diff.

4C. How to Use Antibiotics:

It is important that when antibiotics are chosen to be used that the appropriate dose, route of administration, and length of course are selected. It is imperative that the correct dosage is selected as underdosing can lead to antibiotic resistance (as can not taking antibiotics for the full course) and overdosing will produce toxicity. Assuming this is done correctly, it is imperative that the course is completed, even if symptoms go away. The antibiotic must be continued to ensure that all of the infectious bacteria are killed off. Not finishing them off risks the infection returning and risks it becoming resistant from the antibiotic.

The correct route of administration must also be determined. There are three primary was of administering antibiotics. They are oral, topical, and injection or intravenous. The oral route is a common route for most infections that are fairly non-life threatening in nature. Topical antibiotics are used primarily for skin infections and should not be

swallowed, or God forbid, injected. Lastly injected are administered either as an injection or drip IV for very serious infections that are life threatening in nature, such as sepsis. Injected antibiotics should be administered only by a medical professional as there is A LOT of room for error for an untrained person.

For further information on common dosages, routes of administration, and length of course, I recommend using one of these books that are typically used by healthcare professionals: The Physicians' Desk Reference (PDR), British National Formulary (BNF), Sanford Guide to Antimicrobial Therapy, The Merck Manual, Johns Hopkins ABX Guide, and the Tarascon Pocket Pharmacopoeia. These are all written to be used by medical professionals and contain much more knowledge than I could ever attempt to write here. Just know that self-prescribing or using antibiotics without proper guidance can lead to adverse effects.

Speaking of adverse effects, every drug has a risk for side effects. Common ones for antibiotics are gastrointestinal discomfort in the form of nausea and vomiting. It is important that research is done beforehand when taking antibiotics on what the specific antibiotic can cause. For some people, an allergic reaction is also possible. Allergic reactions are medical

emergencies and need to be treated promptly as without treatment, a patient risks anaphylaxis and death. Allergic reactions usually begin with signs such as rashes, itching, or swelling. If these appear while on an antibiotic, stop promptly and have the antibiotic changed to another effective one for that infection. Allergies can be to entire families of antibiotics, penicillin is a relatively common family for people to be allergic to.

I want to briefly touch on proper storage of antibiotics as well, this is relevant to proper use of antibiotics because if the medicines degrade, they risk not working or even hurting the end user. It is generally understood that medications that go out of date are less effective than those that are in date. With that in mind, it is important that medications be used while they are still in date as some can become dangerous if taken out of date. Tetracycline was historically seen as dangerous if allowed to go out of date but currently there is conflicting data, caution should still be held with regards to this medicine being out of date. Liquid medicines though, especially those that are refrigerated, even amoxicillin suspensions or nystatin suspensions can grow bacteria if out of date or allowed to get warm for extended periods of time. This is also true for eye drops. Taking of these risks creation of another infection, complicating the patient's illness.

With all of this said, a study done by the US military found that many drugs allowed to exist past their expiry were still considered viable for use, do not use this as a trump card that lets you get away with taking drugs from 40 years ago, know that effectiveness will most likely lessen with time. Keeping this in mind, antibiotics should be kept in dark, cool, and dry places. Sometimes even they should be kept refrigerated, it depends on the specific medication and usually there is information on the bottle instructing proper storage.

Lastly I want to discuss proper stockpiling considerations for prepping. First and foremost, only do this if it is legal for you to do so. Don't break the law. Next, ensure that you stockpile enough medication to last for an extended emergency period. Obviously this will be a different length of time depending on your threat and risk assessment. The guy worried about getting a sinus infection during a two week long heavy blizzard in North Dakota won't have the same quantity and variety as the guy preparing for nuclear war. Depending on the length of time being planned, a proper amount of medications should be prepared for a range of health issues. Remember in part 3 where we discussed some of the most common infections that people can have? Remember how just a bit ago we discussed dosages and routes of treatment being laid out in those books? Put 2 and 2 together here to help

plan your preps as well as ensuring to take into account your own health as well as the health of your family. If you are prone to sinus infections that are pretty mean, stocking more augmentin may be more understandable than stocking up on excess clindamycin. Obviously it is best to consult with a medical professional as well as professional resources in the forms of books for this. Just know that variety and quantity will matter the most here. Records should also be kept to keep track of when different antibiotics will go out of date.

4D. C. Diff:

I have mentioned these 5 funny letters twice in this article so far. Before we talk about it, I want to mention how it appears. So far it has always mentioned in the case of antibiotics being inappropriately used but that is not the only way this nightmare can come about. If antibiotics are used for a long period of time, or sometimes even just after one course of antibiotics. C. Diff is an opportunistic bacteria, it waits until our gut flora (good bacteria that live in our digestive tract) are weakened and lessened and then it begins to grow. Risk can be partially minimized by eating fermented foods, yogurts, kefirs, and by taking probiotics in the period between doses of antibiotics.

What is this funny sounding illness though? C. Diff is short for Clostridium Difficile. This bacteria is very hardy. Most antibiotics are useless against it, the former first line of treatment, metronidazole had something like a 30% curative rate (this is from memory, it could be higher but it is abysmally low), the next line of treatment, oral vancomycin has something like a 60% curative rate on the first round of treatment. Nowadays there are drugs like Dificid that were so effective in the study that it was deemed immoral to not allow the patients on the placebo to have the real drug. What I am trying to get at, is this bacteria is strong and it takes special medicines to kill it. It is better to not get it in the first place.

What does it do, though? Diarrhea. The worst you have ever had. You will go from sitting and feeling normal to a rush to the toilet and a foul smelling liquid stool right after. C. Diff has a stench. Anyone who has had it knows the stench. The stool may become yellow or greenish in color. The diarrhea will not stop. If left unchecked it will get worse and worse until the colon closes up. This will then induce toxic megacolon. Where your colon becomes inflamed and filled with this toxic, liquid stool that it risks rupture. It is extremely painful and a medical emergency. If it bursts, its as bad as letting an appendix burst. C. Diff also releases spores that can get on surfaces throughout the house, clothes, and bathroom. Even after treatment, sufferers need to ensure they

disinfect their house and bathroom with bleach to ensure these spores are killed. If they reenter the body via the mouth in any way, the individual risks reinfection and beginning the process all over again. All clothes, particularly underwear, must be washed on the hottest setting for as long as possible and dried on the hottest setting as long as possible to help prevent the bacteria from surviving. These spores are very hardy and cannot be seen by the naked eye. Following treatment, the (now former) sufferer needs to be on the lookout for symptoms returning and seeking treatment again promptly if they do.

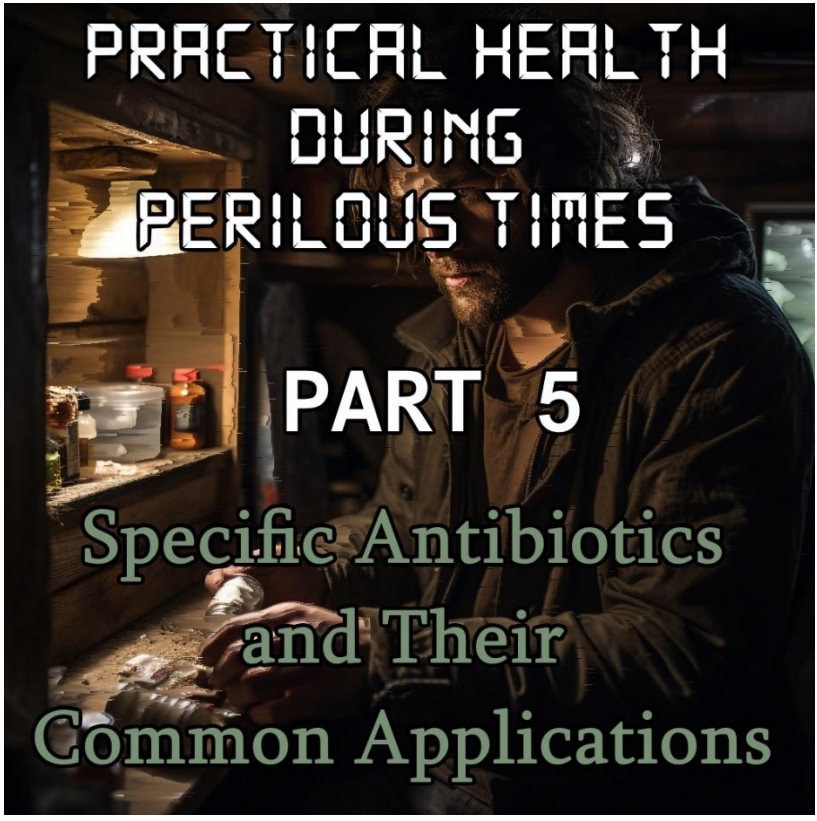
I want to make a short mention also that if you do happen to get C. Diff in a non-prepper related situation, it can be treated very effectively by a medical team. There are medications that can kill it as well as a stool transplant which also has been show to be very effective.

Finally with this section I want to end on a personal note. I stress C. Diff because it is often not discussed. It is a serious illness. I should know, I had it. It was very difficult to treat and I learned a lot about it and it's various treatments during that period. I had it because I kept getting strep throat from a friend who was a carrier and the use of antibiotics eventually just wiped out my

healthy bacteria in the intestinal tract and allowed C. Diff to sneak in and make my life hell. Since then I have had a couple reinfections of it but after almost 5 years, I can say I am back to my old self digestively for the most part. It actually gave me IBS that I will probably have for the rest of my life, but it is better than having C. Diff. I do not want anyone to go through what I did. Be careful. Be aware.

Summing all this up, antibiotics are powerful tools with many different modes of action, classes, administration routes, and risks. Each of these aspects should be taken into account when antibiotics are selected for treatment. Each infection should be treated as unique and approached with a level mind, with considerations for every aspect of the patient and infection, and dosed appropriately. Antibiotics should also be stored appropriately and used while in date to ensure their maximum efficacy. Finally, the patient who is taking them should be aware of the signs and symptoms of C. Diff and take preemptive measures to help prevent it from forming.

Act accordingly.


PRACTICAL HEALTH
DURING
PERILOUS TIMES
PART 5
Specific Antibiotics
and Their
Common Applications

Part 5 of 6: Specific Antibiotics and Their Common Applications

"*Antibiotics are not automatic healers; they are tools to be used wisely*" - Unknown

With this article comes the conclusion of the antibiotic section of this series. We will be discussing the various families of antibiotics, their names, common uses, administration routes, and finally a short list of some resources if you want to dig into this some more (on top of the ones listed in previous articles). Note that these are listed in no particular order and the list of drugs are non-exhaustive.

5A. Penicillin:

Penicillin was the first true antibiotic. It was discovered in 1928 and based on mushrooms found in a cave. This discovery helped save hundreds of thousands if not millions of lives during World War II because now infections that would be fatal could be overcome. Also,

as luck would have it, this class of drug is also extremely effective at treating a broad spectrum of infections. Despite the rise of antibiotic resistant bacteria, this family of drugs stand as the first line of drugs to treat many common infections today. Penicillin works by breaking down the cell wall of bacteria, allowing them to break apart and die. Penicillin is commonly administered as one of three antibiotics: amoxicillin, penicillin V, amoixicillin-clavulanate (augmentin).

Amoxicillin is widely use for ear infections, strep throat, pneumonia, and used in prevention of dental infections following a procedure. It is often administered in an oral form via a pill or a liquid suspension.

Penicillin V is also used and effective at treating mild to moderate infections like strep throat as well as some skin infections. It too is often administered in an oral form. It is not effective against bacteria that produce enzyme beta-lactamase.

Finally is augmentin, used primarily for sinus and ear infections, UTIs (urinary tract infections), and skin infections. It too is primarily administered in an oral form. The clavulanate in this drug inhibits beta-lactamase, an enzyme produced by some bacteria to

resist penicillin. Common bacteria that produce this are: Stphylococcus aureus, E. coli, Kleb, Proteus mirabilis (UTI bacteria), Haemophilus influenzae, and gonorrhea.

Common side effects for these drugs are generally just gastrointestinal discomfort, nausea and diarrhea. Generally they are well-tolerated. Allergies to penicillin are the most common drug allergy and tend to appear as rashes, hives, or anaphylaxis. If an allergic reaction is suspected, the drug should be stopped and the user should have their medicine changed as well as seeking a medical professional, particularly in case of anaphylaxis.

Penicillin, despite antibiotic resistance being on the rise, still stands strong as the cornerstone of threatment of bacterial infections due to its safety, efficacy and broad application. Perhaps as bacteria become more adapted to the medication family things may change but as of the time of writing this, it is the industry standard for first line of treatment for many illnesses.

5B. Cephalosporins:

Discovered in 1945 from a fungus called Cephalosporium, this family of drugs share many similar attributes as penicillin. They disrupt the cell wall synthesis of the bacteria and cause it to die. These drugs, also like penicillin, are very effect against a broad spectrum of bacteria. Three common drugs from this family are cephalexin (Keflex), cefuroxime, and ceftriaxone.

Cephalexin, also known by the brand name of Keflex, is commonly taken for skin infections, UTIs, and respiratory tract infections such as strep throat. It is generally taken orally.

Cefuroxime is effective in treating middle ear infections, sinus infections, bronchitis, and skin infections. It is administered either orally or via injection depending on circumstances.

Ceftriaxone is generally given for more severe infections such as pneumonia, bacterial meningitis, and some sexually transmitted diseases. It is administered intravenously.

This family of drugs have gone through multiple generations to increase their lethality against bacteria as well as to overcome bacterial evolution to resist them. Ceftriaxone is the most broad of the three (third gen) and has great penetration into the central nervous system and makes it extremely useful for severe infections.

Side effects for this family of drugs are slightly more severe than those of penicillin. Gastrointestinal discomfort is common and the risk of C. Diff is greater with these drugs than with penicillin. Allergies are also possible and sometimes cross-reactive with people who have penicillin allergies but this is generally a low risk.

5C. Macrolides:

Macrolides were initially discovered in the 1950s and are derived from Streptomyces bacteria. They work by inhibiting protein synthesis in the bacteria, stopping their growth and replication. Because of their unrelation to penicillin, this family of broad spectrum antibiotics are great for treatment in those who have allergies to

penicillin Some common drugs under this family are azithromycin, erythromycin, and clarithromycin.

Azithromycin is widely used for respiratory infections such as bacterial bronchitis and pneumonia, skin infections, and some STDs such as chlamydia. It is administered orally and has a long half-life which allows for shorter treatment courses.

Erythromycin treats a variety of respiratory tract infections, skin infections, and certain bacterial eye infections. This drug comes in oral, topical, and injectable forms.

Clarithromycin is used for respiratory infections, skin infections, and in combination with other drugs can kill H. pylori, a bacteria that can cause ulcers.

Side effects for these drugs carry the same gastrointestinal effects as the other drugs before it but on top of this can cause temporary hearing loss or a ringing in the ears. They also can interact with certain other medications, particularly heart medications. Resistance to these drugs is on the rise and cautious and judicious use of these drugs is important to help prevent this.

5D. Fluoroquinolones:

This family of drugs are a newer class of antibiotic developed in the 1980s and are known for their potency and large range of effectivities. Fluoroquinolones work by inhibiting two major enzymes that bacteria use for DNA replication and prevents them from properly replicating. These drugs are often referred to as “drugs of last resort” for serious bacterial infections that do not respond to other antibiotics. The two drugs of this family I will mention are ciprofloxacin (Cipro) and levofloxacin.

Ciprofloxacin known under the brand name of Cipro is commonly used for UTIs, gastrointestinal infections, and skin infections. It can also be used for much more serious infections such as anthrax and certain types of plague. This drug comes either in injectable or oral forms.

Levofloxacin is effective for respiratory infections including pneumonia, UTIs, and skin infections. It too comes in oral or injectable forms.

Side effects for these drugs are much more severe than the previous classes of drugs. The FBA even issues black box warnings on these drugs due to their serious

side effects that can include increased risk of tendonitis or tendon rupture, and neurological effects that may be irreversible that effect the joints, nerves, muscles, or central nervous system. Due to their potent nature and broad spectrum, these drugs must be very cautiously used due to risk of resistance growing, particularly because of their status as last resort drugs. These drugs also should not be used on children, adolescents, or pregnant women due to all the potential side effects.

5E. Tetracyclines:

Tetracyclines were discovered in the 1940s and are derived from cultures of Streptomyces, a soil bacteria. These drugs work by inhibiting protein synthesis in bacteria. They bind to the bacterial ribosome which prevents the addition of new amino acids to peptide chains. If you are confused by that, so am I. It basically means they stop bacterial growth. The two drugs of this class that are fairly prominent that I want to showcase are doxycycline and tetracycline.

Doxycycline is effective against a variety of infections including Lyme disease (often given as a prophylactic after possible exposure with a couple doses), some certain respiratory tract infections, acne, and as a prophylactic for malaria. It can also be used for other

lice and tickborne diseases like Rocky Mountain Spotted Fever and Typhus. Its also used for chlamydia and gonorrhea. It comes in an oral and an injectable form.

Tetracycline is used to treat acne, skin infections, and some sexually transmitted diseases. It can also be used in conjunction with other medicines for H. Pylori infections as well.

Tetracyclines are unique in their side effects as they can increase sensitivity to sunlight and lead to a higher risk of sunburn. They are not advised for use with children under 8 or pregnant women due to bone growth slowing risks. Other side effects include gastrointestinal discomforts much like the penicillin family. It should also be noted that those taking these drugs should avoid taking them with dairy or supplements for calcium or iron as they can affect the absorption of these drugs.

5F. Aminoglycosides:

Aminoglycosides were discovered in the 1940s and have played a major role in treating severe infection since their discovery. These drugs work by inhibiting protein synthesis resulting in the death of the bacteria. These drugs are very powerful and are used against very serious infections and should not ever be used willy-nilly. These drugs are almost entirely exclusive to hospital settings but I will give them a brief description here in case you are in a zombie apocalypse and find yourself in a hospital. The two I want to mention are Gentamicin, and Tobramycin.

Gentamicin is used for treatment of severe infections like sepsis, hospital acquired infections, and certain types of pneumonia. This drug is almost exclusively given via injection.

Tobramycin is effective against severe respiratory tract infections, particularly in cystic fibrosis patients as well as other serious infections caused by gram-negative bacteria. This drug comes in injectable and inhalable forms. The inhalable form is for direct delivery to the lungs in cystic fibrosis patients.

The side effects for these drugs can be very serious and patients taking them should only be in a hospital setting. Side effects include damage to the ears, and kidneys, which can be irreversible. Monitoring of levels of drugs in the blood is often needed. These drugs should also be avoided when pregnant as there is a high risk of toxicity to the developing child.

5G. Sulfonamides:

Sulfonamides, also known as sulfa drugs, were some of the first antibiotic type drugs discovered. Introduced in the 1930s, they marked a significant growth in the ability to treat bacterial infections. These drugs work by preventing bacteria from producing folic acid and stops them multiplying. The most common sulfa drug is trimethoprim-sulfamethoxazole also know as Bactrim or Septra.

This drug, is used to treat UTIs, certain pneumonias (including PCP pneumonia in HIV patients), traveler's diarrhea, and some types of skin infections and can come in oral and injectable forms. This drug is often used in conjunction with trimethoprim to enhance its effectiveness against specific bacteria types.

Side effects for sulfa drugs include gastrointestinal distress, sensitivity to sunlight and rarely blood disorders. Also, allergic reactions are not uncommon including Steven-Johnson Syndrome where the sufferer breaks out in a heavy rash that spreads and blisters.

5H. Lincosamides:

Lincosamides were discovered in the 1960s and are very effective against bacteria that thrive in low oxygen environments while also having a fairly broad spectrum of use. These drugs inhibit protein synthesis, stopping bacterial growth. I will only mention one common drug from this family and that is Clindamycin.

Clindamycin is commonly used to treat serious skin and soft tissue infections, dental infections, and anaerobic (low oxygen) infections. It can also be used for infections of staphylococci and streptococci (staph and strep infections). It is available in oral, topical, and injectable forms. It is also effective at killing some protozoa.

Clindamycin is often used as an alternative to penicillin for patients with a penicillin allergy as well as used against penicillin resistant bacteria. Side effects can include gastrointestinal upset, rash, and liver toxicity. It also carries the highest risk of C. Diff infection out of all of the drugs I have mentioned so far (as far as I am aware). Patients using this drug need to be very aware of the signs and symptoms of C. Diff before taking.

A short note, this was the drug I took when I was dealing with recurrent strep infections when normal penicillin was not working. It cured the strep but gave me C. Diff. Be alert.

5I. Topicals:

This section is different than all the others as it is not a class of any drug in particular. I wanted to talk about antibiotics that are applied topically. The three I want to discuss are mupirocin, neomycin and polymyxin B, and topic clindamycin.

Mupirocin is used in treated skin infections like impetigo, minor wounds, infected hair follicle, and used

to eradicate nasal carriage of MRSA. It is applied as a topical cream or ointment.

Neomycin and polymyxin B, are often combined with Neosporin or Bacitracin for minor cuts, wounds, and abrasion to prevent infection. It is also applied as a topical ointment or cream.

Lastly is topical clindamycin, it is used to treat acne and as an adjunct treatment for certain skin infections. It is applied as a lotion, gel, or solution.

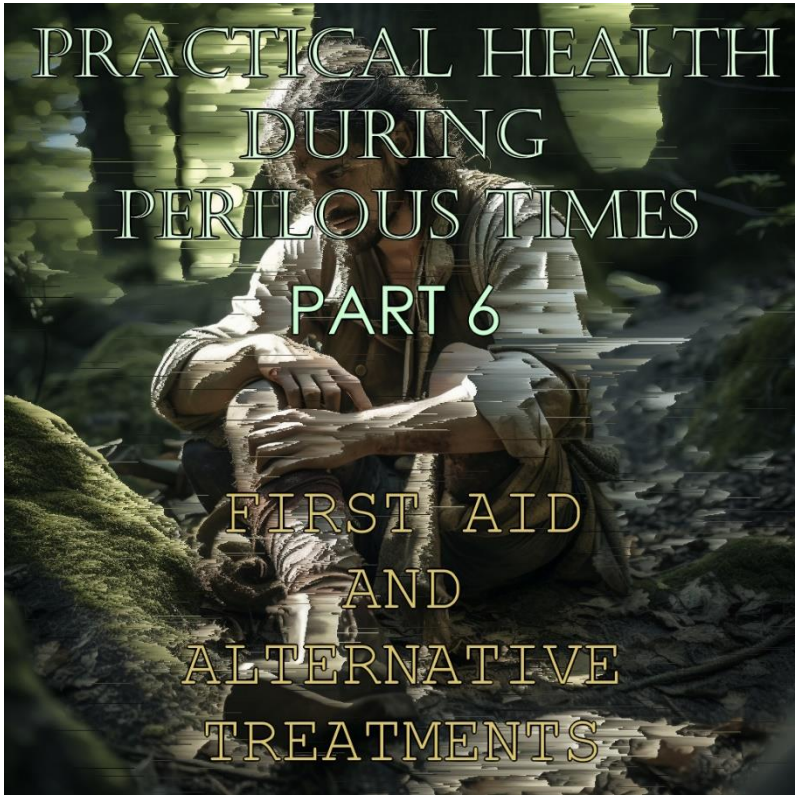
These drugs act directly at the site of infection or injury and minimize systemic exposure, this means that most side effects are pretty limited. Some individuals may get contact dermatitis or allergic reactions. They should not be applied over large areas of skin or for extended periods of time as this can contribute to antibiotic resistance.

Part 5 Conclusion:

There are many types of antibiotics and they all serve with different strengths, weaknesses, positives, and negatives. A prepper who is able to legally stockpile

these medicines should consider their choices and only stock what is appropriate for what they are expecting, their understanding of the information, and actual medical knowledge.

Act accordingly.


PRACTICAL HEALTH
DURING
PERILOUS TIMES
PART 6
FIRST AID
AND
ALTERNATIVE
TREATMENTS

Part 6 of 6: First Aid and Alternative Treatments

"*Healing is a matter of time, but it is sometimes also a matter of opportunity*." - Hippocrates

To round out this series I want to cover some basic and slightly more advanced first aid tips as well as sharing some basic knowledge about alternative treatments that aren't hogwash (see crystal healing) in the form of herbal remedies and essential oils. This section may seem out of place but it is arguably the most relevant to most people in most times. First aid is something that can be applicable in so many more places than just a societal collapse. Following this line of thinking, herbal medicines and essential oils can be purchased or found relatively easily, allowing an individual plenty of time and resources to research their individual efficacy (done responsibly and with proper research of course). As with almost every single aspect of this series, this is not an exhaustive list of everything you should know. The purpose of all of this is the give the average reader a good ground to start reading and researching into each of these subjects.

6A. First Aid Basics:

The basics of first aid are often overlooked in this community because it is not relatively “sexy.” That is to say, it isn’t as high drama as putting a tourniquet on a bullet wound or as exciting as building a splint in the brush. While we will discuss those to some extent in the next section, the basics are what everything else must be built on. The skills one learns from the basics will be utilized more often than those for more extreme scenarios. I also want to add that both this section and the intermediate one will include some information that was initially discussed in part 1 of this series, I am aware of this, but I want to leave it in for those who decide to jump straight into these sections.

Minor wounds.

Minor Cuts and Abrasions, this is for any wound that is not too deep and where the bleeding stops within 5 to 10 minutes of direct pressure. Wounds that go to deep will requires a suture which I will not be covering in this

series as I consider it well outside of my wheelhouse. First, apply gentle pressure with a clean cloth to the wound. Then rinse it with water that is safe to drink. Then apply an antiseptic and/or an antibiotic ointment. For more information related to sanitizing wounds, refer to part 1 of this series. Once the wound is cleaned and sanitized, apply a sterile bandage or an adhesive strip bandage to site. Change the bandages when necessary, the wound should be kept dry. Keep an eye out for signs of infection (see part 1).

Minor burns.

Minor burns (including sunburns). Begin with cooling the area, run cool water over the area or use a cold compress. Then cover with a sterile, nonstick bandage. In case of any visible wound, follow standard wound treatments. If there is a blister, do not puncture it and take care to leave it intact. Breaking the blister can risk infection. In case of a sunburn, use a soothing cream or lotion such as aloe vera, moisturizing lotion, or even calamine lotion to the site to soothe pain.

Sprains.

Sprains are when a ligament is either stretched or torn. They cause pain, swelling, and impede on normal movements. If a sprain is suspected, reduce movement and stress to the area as fast as possible. Then apply ice every 20 minutes every 2 hours to reduce swelling. Use an elastic compression wrap and elevate the limb. For the first week or so, the area should be rested and protected as swelling reduces. The next week to 2 weeks, range of motion, strength, and flexibility will begin to return. After this, gradually begin reintroducing activities that do not require turning or twisting the area until it is fully healed.

Nose bleeds.

Nasal bleeds are a nuisance and for some people a common occurrence. For a common nose bleed, sit upright and lean forward to avoid swallowing the blood. Then pinch the soft part of the nose for several minutes until the bleeding slows. A cold compress can be applied to the nose and cheeks to constrict blood vessels as well. If the bleeding does not stop or gets worse, finding a medical professional is ideal.

Insect bites, stings, and minor allergic reactions.

For insect stings, if the stinger is still in place, remove the stinger using a flat edged object to scrape it off. A credit card is perfect for this. For insect bites that produce an itch, as well as for seasonal allergy, use of an oral antihistamine can help. For both insect bites and stings, as well as allergic reactions of the skins that are minor, use of a calamine or hydrocortisone lotion or cream can help soothe the area and reduce itching and burning.

Tick bites.

I wanted a separate section on tick bites as they are unique from most insect related injuries. Ticks embed their heads into their unlucky host's body and can be difficult to remove. To remove a tick from the skin use fine-tipped tweezers to grab hold of the tick as close to the skin as possible and pull upward with steady, even pressure. The goal here is to ensure that the head of the tick does not get stuck inside of the skin as this can lead to illness and infection. If there is a small, dark spot on the skin where the head was and the tick appears headless, the head of the tick is still embedded in the

skin. There are various schools of thought on what to do with regards to removing a tick head from the skin and I do not feel comfortable writing any of them here. If this is a valid concern for you, do some research as to your options should a tick head become embedded in the skin.

Heat exhaustion.

Heat exhaustion can claim lives and does every year. Heat exhaustion happens when the body gets too hot and cannot properly cool itself down quick enough. Symptoms of heat exhaustion are heavy sweating, weakness or tiredness, cool, pale, or clammy skin, a fast and/or weak pulse, muscle cramps, dizziness, nausea, vomiting, headache, or fainting. The moment a heat casualty is suspected, the individual must be moved to a cool location, have their clothing loosened, and have their body cooled by air conditioning, cold water, ice, fans, or all of the above. The patient should be given water to hydrate or a sports drink with electrolytes. The patient should be observed to watch for worsening symptoms that could indicate heat stroke which can be a deadly condition if untreated.

6B. Intermediate First Aid:

Sometimes the situation that one finds themselves in can be more serious and even require medical attention. Obviously in a collapse scenario that is much more easier said than done but it should be mentioned nonetheless. The goal of this section is to provide information for situations that are more complex or severe in nature.

Deep wounds.

In case of a wound that is deeper than a standard cut and is bleeding, particularly if it is bleeding rapidly, it must be stopped as fast as possible! Begin with direct pressure on the wound with a clean rag. If the bleeding does not slow or stop, a tourniquet should be applied rapidly to prevent further blood loss. When applying a tourniquet, the rule of thumb commonly used is high and tight. If the wound is on the calf muscle, apply the tourniquet on the upper thigh, directly on the skin is ideal to ensure a good compression of the blood supply. Never apply a tourniquet for a wound to the thorax, or the head and neck. Tourniquets should only be used for limbs! For wounds on those parts, use a compression

bandage. After bleeding is controlled, the wound should be gently cleaned to remove dirt, debris, and bacteria. Avoid any deep probing of the wound as this can cause further damage. Following this, seeking a professional is ideal as the wound will most likely need a suture or something more medically intense than can be done by the common man. Sutures can be purchased and held by the average person, if you decide to do this, practice with silicone skin analogues to ensure that you understand the process thoroughly. Know when to apply sutures and when to seek professional or more intense care!

Moderate to severe burns.

For moderate to severe burns, run cool water on the burn area rapidly, keep it under cool water for at least 20 minutes, do not use ice, and then cover the area with sterile and non-adhesive dressings. For serious burns, avoid using creams or ointments until the area has been properly evaluated by a professional. Treat the pain using a painkiller such as acetaminophen or ibuprofen. Seek medical care promptly as burns are large wounds and they can become infected very easily!

Fractures.

A fracture occurs when a there is a partial or complete break in a bone. There are two types of fractures, open or closed. An open fracture is when the bone pokes through the skin and can be seen or can be seen under the skin easily. A closed fracture is when the bone is broken but the skin is intact. If this occurs, a splint should be applied immediately to prevent the area of the body still to prevent it from moving, preventing further injury. It also can provide pain relief to the limb and support the bone ends of the fracture site. The effected individual should avoid movement and keep still until further medical aid can be applied. Pain management should be started promptly as these are very painful.

Head injuries.

When dealing with a head injury, the effected individual should be evaluated for a concussion. Look for signs such as confusion, nausea, or drowsiness. Ask the effected person questions that are very obvious such as: who is the president? What day is it? What year is it? These are some good cursory questions to ask to help gauge their state. If an injury to the spine is suspected as well, minimize any movement of the neck! A severe

head blow should be further evaluated by a medical professional to determine if there is any further trauma or dangerous conditions such as a brain bleed.

Severe allergic reactions.

A severe allergic reaction can encompass many things but I want to primarily address anaphylaxis. Anaphylaxis is when the throat, tongue, or anywhere in the airway begins to swell to the point where breathing becomes difficult or impossible. If this happens, the effected individual should either apply themselves or have another person apply an epinephrine pen into the middle of the outer thigh. Following this the person should be promptly removed from the source of allergic reaction. If it is an insect sting, remove the stinger. Seek medical attention if possible following this as after the epinephrine wears off, the allergic reaction may return or resume.

Heat stroke and hypothermia or frostbite.

Heat stroke is the more extreme version of heat exhaustion and is a severe medical condition that if not treated promptly, will result in death or extreme damage. The effected person must be cooled

immediately. Excess clothing should be removed and cool water applied to effected person or use of ice packs, particularly to the head. If the person is conscious, provide them water. Seek medical attention if possible. Continue cooling the person.

Hypothermia happens when the body is unable to maintain its internal operating pressure. Symptoms of it are shivering, slurred speech, slow and shallow breathing, a weak pulse, lack of coordination or clumsiness, drowsiness, confusion, or loss of consciousness. The person must be moved to a warm place rapidly to prevent death. Warm the body gradually and avoid direct heat. Moving them into a warmed house, or a warm bath, or a warm fireplace are good ideas.

Frostbite is when the skin is damaged by extreme cold and comes in 3 stages. The first stage is frostnip, a mild form of frostbite, the skin will appear irritated and the skin color can change. The sufferer will have a cold feeling followed by numbness. Superficial frostbite causes slight changes to skin color, if the skin begins to feel warm to the touch, there is a serious skin injury at play. The person may feel the area stinging, burning, and even swelling. The skin may also appear mottled. A fluid filled blister may appear 12 to 36 hours after

warming the skin. Lastly is deep frostbite. The skin will turn white or blue-gray and all sensation will be lost to the area. Joints and muscles may also stop working at this point. After rewarming, large blisters may form in the hours to days following this. The skin on the area will then turn black and hard as it dies. Severe frostbite is when fingers, hands, and feet can be permanently lost due to the tissue going necrotic and dying. As soon as frostnip is suspected, the effected person should warm the area promptly. Do not try to rub or apply snow to insulate the area, just get it to a warm place as fast as possible.

Severe dehydration.

Severe dehydration can occur from a heat casualty or from an individual not having access to water for long periods of time. A person with severe dehydration will feel very thirsty, have a very dry mouth, may be breathing fast, have a fast heart rate and low blood pressure, have a fever, have little to no urine production, and appear irritable, drowsy, or confused. Fluids should be slowly replaced and a sport drink slowly administered to introduce electrolytes. The person should be watched for worsening symptoms such as confusion or a rapid heart rate. Sometimes when this occurs, intravenous fluids are needed and medical

attention should be sought. If this occurs in conjunction with a heat casualty, the person should be cooled down as well. If the body is not rehydrated, damage to the urinary tract and kidneys can occur.

6C. Herbal Medicines:

A quick word before I begin talking about this section. Obviously, do not take anything in this entire series as medical advice but if herbal medicines are to be utilized, it would be prudent to determine if any of these herbal medicines will interact with any prescription medications that someone may be taking. For example, someone taking antidepressants should stay away from St. John's Wort as it can cause serotonin syndrome and possibly lead to death. With that in mind, herbal medicines are not as efficacious as modern medicine but in a collapse or prepper scenario, can be wise to make use of when use of modern medicine must be done judiciously. Obviously I will not be listing all of the herbal medicines that exist as that would encapsulate an entire book in and of itself, I just want to establish a solid foundation for someone to use as a jumping off point for further research. Also note that like with all medicines, allergies to these substances may exist and may range from mild to severe.

Echinacea.

Echinacea has a long history in traditional medicine for use in colds and boosting the immune system. A meta-analysis study found that it had little to no effect on treatment of cold symptoms but did find evidence that use of it's extracts reduce the risk of repeated respiratory infections. It can be taken in a tea, a tincture, or in capsule form.

Chamomile.

A common sleep aid in current life. Chamomile has been attested to helping with sleep, reducing anxiety, and helping treat mild digestive issues. It is commonly consumed as a tea but it can be used in a topical oil for minor skin irritations.

Ginger.

Ginger is an effective agent for mild to moderate nausea, and aids in digestions, and has anti-inflammatory properties. It can be eaten fresh as food, used in a tea, or consumed as a supplement.

Turmeric.

Turmeric has been identified by the European Medicines Agency as a useful herbal medicine for relieving mild digestive issues. There is weak evidence that it may be beneficial for relieving symptoms of knee osteoarthritis, as well as reducing pain and muscle damage following physical exercise. Anecdotal evidence and historical claims say that it is anti-inflammatory in nature, but no studies have confirmed this. It can be added to food, taken as a supplement, or applied as a paste for mild skin conditions.

St. John's Wort.

St. John's Wort can be used for mild to moderate depression, anxiety and sleep disorders. It is typically taken in capsule or tincture form. If the individual who is taking it is on antidepressants, they should not take this herbal treatment as it can cause serotonin syndrome and kill them.

Garlic.

Garlic historically has been known for having antimicrobial properties, it also has been claimed to assist in reducing cholesterol and blood pressure. It can be consumed fresh and raw, used as a supplement, or used in cooking.

Peppermint.

Peppermint can be used to soothe digestive issues, allegedly for headache relief, and reportedly reduces symptoms of irritable bowel syndrome. It can be taken in a tea, oil capsules, or in essential oil topical use.

Milk Thistle.

There have been no studies on Milk Thistle showing any positive changes but has been purported to promote liver health and aid the liver with detoxification. It can be taken as a supplement. It has been known to cause upset stomach and if taken in high enough doses, can cause toxicity.

Willow Bark.

Willow bark contains the chemical salicin, which is very closely related to aspirin. It has pain and fever reducing properties like aspirin. It can be used for mild aches and pains and fevers. It can be consumed as a tea or taken in capsule form.

Lavender.

Lavender has been recognized as generally recognized as safe by the US FDA and has history of use during hospitals in World War 1. Lavender reportedly can reduce stress and anxiety, aid in sleep, and soothe skin irritations. It also has been reported for use with intestinal discomfort and supposedly heart disease. It can be taken as a tea, used in aromatherapy, or applied topically as an oil.

Valerian Root.

Valerian root has not been sufficiently shown in studies to be effective in treatment for anything but has been claimed to be mildly effective for mild nervous tension and insomnia. It can be taken as a tea or a supplement.

It should not be taken with any depressions or antihistamines. It also should not be taken by pregnant women as it can harm the forming child.

Licorice Root.

Licorice Root has been claimed to soothe gastrointestinal problems and to treat respiratory issues. There are risks for potential toxicity and other side effects and should be researched thoroughly before considered to be considered for any reason. It can be chewed raw, consumed in tea, or taken as a supplement.

Hawthorn.

Hawthorn has been used in traditional herbal medicine, particularly in China. It has been claimed that it can strengthen the cardiovascular system and assist with managing blood pressure. It can be consumed as tea, tincture, or as a capsule.

Ginkgo Biloba.

Ginkgo extracts have been used in medical research but there is currently little to no evidence suggesting that it is effective for treatment of high blood pressure, tinnitus, or stroke recovery. There is weak scientific evidence that it can positively affect dementia in people with schizophrenia. It has also been claimed to improve cognitive functioning. It has been noted to also be dangerous for pregnant women to take as well as interacting with blood thinners as well as other drugs.

Conclusion for Herbal Medicines.

Herbal medicines, while having historical uses are not guaranteed to be successful in treating anything but can pose as an alternate option for those who don't want to start dipping into their medical supplies early. They shouldn't replace treatment for any major issues but it can be useful to supplement with other treatments. Care should be taken to ensure that the medicines taken will not interact with any prescription drugs or cause harm to a pregnant woman.

6D. Essential Oils:

For my entire life until fairly recently, I was under the impression that essential oils were a scam to trick women into giving their money for nice smelling oils. While those do exist, upon further research, I have discovered that some of them do have positive effects of use. Like with the herbal section, this list is not exhaustive and further research should be taken to ensure that it does not interact with any prescription medicines. They also pose a risk for allergic reaction as well. These should also not be used as a replacement for treatment of serious illness and infections. You should also not ingest these unless they are commonly ingested and dosages should be determined via rigorous research.

Tea Tree Oil.

Tea Tree Oil should never be taken orally as it is very toxic. It has been stated by the European Medicines Agency as being a possible treatment for small, superficial wounds, insect bites, athlete's foot, and small boils. If used, it should be diluted with carrier oil.

Peppermint, Chamomile and Lavender Oil.

I wrapped these together because these substances were covered earlier and exist in an oil form. Allegedly they can be used topically for mild skin irritations and insect bites.

Eucalyptus Oil.

Eucalyptus Oil has been studied and found to be effective for use as a decongestant and has been used for respiratory issues such as colds and bronchitis. It has also been used as an insect repellent since the 1940s in the United States. For respiratory use, add a few drops to steaming water or use in a diffuser. Do not apply it undiluted to the skin.

Frankincense Oil.

Frankincense Oil has been used for anti-inflammatory effects and potentially may benefit joint pain and skin health. It should be diluted with carrier oil and applied to the skin.

Rosemary Oil.

Rosemary Oil may improve focus, memory, and circulation. Topical use can also help in reducing muscle pain. It should be inhaled for cognitive benefits and applied diluted for muscle pain. Inhaled means use in a diffuser or a few drops in hot water, do not snort this stuff or anything.

Lemon Oil.

Lemon Oil contains antiseptic properties due to the high levels of vitamin C in the oil and can be useful for skin cleansing and cleaning in general.

Thyme Oil.

Thyme Oil has been studied to be have a range of properties including antimicrobial, antifungal, and antioxidative. It may even be effective in treatment of very minor infections. If used it should be diluted significantly before topical application due to its potency. It should never be ingested.

Conclusion for Essential Oils:

While there is not a rigorous amount of data for essential oil use, there is enough evidence to suggest that some essential oils actually can serve a therapeutic purpose. Special care should be taken by anyone curious and considering using any of these and should do proper research before starting. Do your due diligence and consult with a doctor before testing anything out on yourself!

Act accordingly.

Closing thoughts:

While the idea of fighting against looters, raiding grocery stores, and developing agricultural plans is very entertaining, it is very easy to overlook some of other aspects of modern life that keep us alive and (relatively) healthy. Medicine in the last 100 years has come leaps and bounds. A simple staph infection can be easily treated now when a century ago could have proved fatal or at the very least ended in amputation. Should a collapse scenario ever strike the modern world, medicine will be very hard to come by. Even if all the doctors in your area stayed in their homes and didn't flee or perish in whatever circumstances you are concerned about, they won't be available on demand as they are now. The 9 to 5 job won't really exist in the way it does now. The average doctor will be doing what the average lawyer and construction worker will be doing, supporting their family and keeping them safe. While they may offer trade for their services, it doesn't guarantee any care. Being proactive now in the form of education and legal stockpiling, can save resources and lives later. While the information in this book is a

relatively wide scope, it is only as deep as a puddle. Use the time that is available now to better understand the subjects within and more. While a man with a gun can kill you, so too can a wound getting infected. I am not saying you need to prepare for every scenario include getting cancer or AIDS while in a survival situation, you should at least be acquainted with some of the more in depth ways to care for yourself and your family should the unthinkable happen.

Act accordingly.